

CLAIMS

1. Process for identifying compounds that are able to modulate the release of neuromediator, characterized in that at least one compound that is to be tested is brought into contact with a nerve tissue preparation and in that the possible modulating effect of said compound on the release of neuromediator by said nerve tissue preparation is determined.

2. Process according to claim 1, wherein at least one compound that is to be tested is brought into contact with a nerve tissue preparation, then said preparation or its supernatant is brought into the presence of one or more substances of which at least one can react with a neuromediator that is released by the nerve tissue preparation, and wherein the possible modulating effect of the compound or compounds to be tested is determined by detecting or by metering one or more of said detectable substances if a neuromediator is released, or by detecting or by metering at least one product that results from the transformation of one of said substances if a neuromediator is released.

3. Process according to one of claims 1 or 2, wherein the compound that is to be tested is an isolated compound, a compound mixture, a biological sample, a combinatorial bank, a synthetic molecule or a natural molecule.

4. Process according to any of claims 1 to 3, wherein the nerve tissue preparation comprises microcubes of mammal cerebral material.

5. Process according to claim 4, wherein the nerve tissue preparation comprises cerebral cortex microcubes.

6. Process according to any of claims 1 to 3, wherein the nerve tissue preparation comprises foamy fibers of mammal cerebral material.

7. Process according to claim 6, wherein the nerve tissue preparation comprises foamy fibers of the cerebellum or the hippocampus.

8. Process according to any of the preceding claims, wherein after having brought the compound or the compounds to be tested into contact with the nerve tissue preparation, a sample is taken from the supernatant on which is determined the possible modulating effect of the compound or compounds to be tested by detecting or by metering one or more of said detectable substances if a neuromediator is released, or by detecting or by metering at least one product that results from the transformation of one of said substances if a neuromediator is released.

9. Process according to any of the preceding claims, wherein the possible modulating effect of the compound or compounds to be tested is determined by a detection or a metering of emitted light.

10. Process according to any of the preceding claims, wherein the possible modulating effect of the compound or compounds to be tested on the release of one or more neurotransmitters selected from among glutamate (Glu),

acetylcholine (Ach), γ -aminobutyrate (Gaba), the catecholamines, in particular dopamine (DA) or ATP is determined.

11. Process according to claim 10, wherein at least one compound that is to be tested is brought into contact with a nerve tissue preparation, then said preparation or its supernatant is brought into the presence of one or more enzymes of which the substrate of at least one is a neuromediator and at least one agent that can emit light following the degradation of said neuromediator by its enzyme.

12. Process according to claim 10, wherein at least one compound that is to be tested is brought into contact with a nerve tissue preparation, then said preparation or its supernatant is brought into the presence, successively or simultaneously, of acetylcholinesterase, choline oxidase, peroxidase, and luminol, and wherein the light emitted by the degradation of luminol following the degradation by acetylcholinesterase of the acetylcholine released by the nerve tissue preparation is detected or metered.

13. Process according to claim 10, wherein at least one compound that is to be tested is brought into contact with a nerve tissue preparation, then said preparation or its supernatant is brought into the presence, successively or simultaneously, of glutamate dehydrogenase, oxidoreductase, luciferase, NAD and decaldehyde, and wherein the light emitted by the degradation of the decaldehyde following the degradation by the glutamate dehydrogenase of glutamate released by the nerve tissue preparation is detected or metered.

14. Process according to claim 10, wherein at least one compound that is to be tested is brought into contact with a nerve tissue preparation, then said preparation or its supernatant is brought into the presence, successively or simultaneously, of gabase, oxidoreductase, luciferase, NAD and FMN, and wherein the light that is emitted by the degradation of SSAL following the degradation by the Gaba gabase released by the nerve tissue preparation is detected or metered.

15. Process according to claim 10, wherein at least one compound that is to be tested is brought into contact with a nerve tissue preparation, then said preparation or its supernatant is brought into the presence, successively or simultaneously, of lactoperoxidase, O^2 and luminol, and wherein the light that is emitted by the degradation of luminol following the degradation by the lactoperoxidase of a catecholamine released by the nerve tissue preparation is detected or metered.

16. A kit for the implementation of a process according to any of the preceding claims, wherein it comprises:

- One or more nerve tissue preparations in separate compartments,
- One or more substances of which at least one can react with a neuromediator that is released by the nerve tissue preparation, and at least one of said substances can be detected if a neuromediator is released or of which at least one product that results from the transformation of one of said substances can be detected if a neuromediator is released,

-- Optionally one or more reference compounds whose effect on the release of one or more neuromediators by the nerve tissue preparation is known.

17. A compound that can modulate the pre-synaptic release of one or more neuromediators, identifiable by a process according to any of claims 1 to 15.

18. Use of a compound according to claim 17 for the production of a medication that is intended for the treatment or the prevention of diseases of the nervous system.